**Position Title**
Aerospace Engineer, AST, Aerospace Vehicle Design & Mission Analysis

**Organization**
E403 / AERONAUTICS SYSTEMS ANALYSIS BRANCH

**NASA Announcement Number**
LA13D0014

**Vacancy Type**
Case File

**OPM Control Number / Status**
336816900 / Posted

*http://www.usajobs.gov/GetJob/ViewDetails/336816900*

**Salary Range**
$68,809 - $106,369

**Open Dates**
02/07/2013 - 02/28/2013

**Pay Plan - Series / Grade (Low, High, Potential)**
GS - 0861 / 12, 13, 13

**Position Information**
Full-Time / Term

**Duty Location**
511180650 - Hampton, VA (2)

**Who May Be Considered**
This announcement is open to all qualified U.S. citizens.

**Citizenship Required**
True

**Job Summary**
Positions are located in SACD's Aeronautic Systems Analysis Branch and serve as vehicle configuration specialists supporting Aeronautics Research Directorate (ARD).

**Comments**
Positions may be filled at either the GS-12 or GS-13. The full performance level for this position is GS-13. If selected at the lower level, employee may be non-competitively promoted to the next grade when qualified and recommended by management.

This is a Term appointment not to exceed four years which may be extended beyond the initial appointment date, for a period not to exceed a total of six years. Under the NASA Flexibility Act of 2004, Individuals appointed under this announcement may be converted to permanent appointment, either non-competitively or through internal agency competitive placement procedures.

To receive consideration, you must submit a resume and answer NASA-specific questions. The NASA questions appear after you submit your resume and are transferred to a NASA web site. If you successfully apply, USAJOBS will show your application status as 'resume received - complete.' If your status is 'Application Started,' you have not successfully applied. Do not rely on a USAJOBS email to confirm successful application only an email from NASA confirms a successful application.

## Marketing Summary

Are you thinking about the future? At NASA, we make the future happen. Become a part of the NASA team - and develop job skills that could take you farther than you ever imagined. Start your career by building a bright future for yourself at NASA, recognized as one of the best places to work in the Federal government. The opportunities are "out of this world!"

## Key Requirements

1. A one-year trial period may be required.
2. Applicants must meet all qualification requirements by appointment date.
3. Relocation expenses will be authorized.
4. Occasional travel may be required
5. Successful completion of a background investigation will be required.

## Total number of openings

Few

## Major Duties

The vehicle design process is typically divided into three phases or levels (Conceptual Design, Preliminary Design, and Detail Design). Although capable of "paper to flight-test ready" design, the Aeronautics Systems Analysis Branch (ASAB) focuses on the conceptual to preliminary design of current and advanced airspace vehicles and their technological and environmental impacts on the NEXTGEN air transportation system.

ASAB's goal for conceptual vehicle design is to provide the general size and configuration of the vehicle based upon fundamental analytical procedures. The procedures consist of drag and mass prediction, preliminary aerodynamic estimates to converge on the best wing loading, wing sweep, aspect ratio, thickness ratio and basic wing-body-tail-gear configuration; basic static stability and control surface sizing, and powerplant consideration to achieve the best airframe/propulsion match.

ASAB's vehicle analysis typically consists of sizing/optimization of a configuration for a given figure of merit. Figures of merit include, but are not limited to, minimizing takeoff gross weight, fuel burn, time to climb, cost, or maximizing range. Products include mission analysis, environmental impacts (noise, emissions), technology trade studies and sensitivities, cost-benefits analysis, and portfolio analysis.

These positions support the execution of systems analysis, mission analysis and technology assessment for the entire size/speed range of advanced atmospheric missions, vehicle concepts, and aeronautical technologies. The initial focus will be to function as part of a systems analysis team as a "vehicle configurator" aerospace engineer to design and analyze advanced aircraft concepts and to conduct studies of advanced vehicle configuration impacts on NEXTGEN airspace system improvements in support of NASA's Aeronautics Mission Directorate and other organizations as required. A secondary focus will be to function as an integrated vehicle/airspace analyst designing and analyzing future airspace concepts that take advantage of advanced vehicle concepts.

The incumbents will serve on a technical team to conduct inter-disciplinary design and analysis studies and will:

- Contribute new designs, or techniques that are of material significance in the solution of important applied problems with unprecedented or novel aspects
- Conduct configuration studies to assess technical feasibility
- Develop new and unique tools and methods to support the analysis of unconventional configurations
- Perform requirements development and analysis, trade studies and sensitivity analysis
- Utilize Multi-disciplinary Design Optimization (MDO) tools and techniques to design and analyze advanced aerospace concepts
- Publish technical data and develop scientifically based standards for engineering application
- Integrate various study and analysis results into comprehensive technical briefings, reports and technical papers.

## General Qualifications

In addition to the basic education requirement, applicant must have one year of specialized experience equivalent to the next lower grade, which has equipped the applicant with the particular competencies needed to successfully perform the duties of the position described above.

For the GS12 level: Examples of specialized professional experience include: demonstrated experience in conducting engineering analyses and/or assessments; computational and statistical techniques for modeling, and analyzing results from those models; and demonstrated experience in most of the following: vehicle performance and/or the impact of those vehicles on the National Airspace (NAS), trade studies and sensitivity analysis, unique tools and methods to support the analysis of unconventional configurations, and tools and techniques to design and analyze advanced aerospace concepts.

For the GS13 level: Examples of specialized professional experience include: demonstrated experience in conducting independent engineering analyses and/or assessments; computational and statistical techniques for modeling, and analyzing results from those models; and demonstrated experience in most of the following: vehicle performance and/or the impact of those vehicles on the National Airspace (NAS), requirements development and analysis, trade studies and sensitivity analysis, unique tools and methods to support the analysis of unconventional configurations, and Multi-disciplinary Design Optimization (MDO) tools and techniques to design and analyze advanced aerospace concepts.

## Educational Qualifications

Basic Education Requirement: A bachelor's degree from an accredited college or university with major study in engineering, physical science, mathematics, life sciences, computer science, or other field of science. Degrees in engineering technology are not considered to be qualifying for this position.

Required college majors:
Aeronautical Engineering, Aeronautics, Aerospace Engineering, Astronautical Engineering, Astronautics, Astrophysics, Electrical Engineering (except power), Electronics Engineering, Applied Mechanics, Engineering Mechanics, Mechanical Engineering, Nuclear Engineering, Nuclear Engineering Physics, Physics, Applied Physics, Engineering Physics. Other appropriate physical or computer science, mathematics or engineering fields are qualifying if the major includes or is supplemented by at least 12 semester hours (or the equivalent) of appropriate physical science or engineering courses including nine semester hours (or the equivalent) of physics, thermodynamics, fluid dynamics or gas dynamics.

FOREIGN EDUCATION
Applicants who have completed part or all of their education outside the U.S. must have their foreign education evaluated by an accredited organization to ensure that the foreign education is comparable to the education received in accredited educational institutions in the U.S. A written evaluation of any foreign education must be provided with your application in response to this vacancy announcement or be received by the closing date of this announcement. For a listing of services that can perform this evaluation, see the National Association of Credential Evaluation Services (NACES) website at http://www.naces.org/memebers.htm. Failure to provide this evaluation will result in your being found unqualified for the position.

PLEASE NOTE: If your foreign education has already been accepted by an accredited U.S. educational institution as part of a degree program with that institution, you do not need to provide an evaluation of foreign education but must submit a copy of the transcripts listing the degree from the U.S. accredited institution that accepted your foreign education if you are selected.

## Requirements

U.S. citizenship is required.

## How You Will Be Evaluated

NASA uses an automated system (Resumix) that matches the competencies extracted from your resume to the competencies identified by the selecting official for the position. Based on the competencies you match, you are placed in one of three categories identified as 90, 80, or 70 pt. quality categories, which are defined as:

<u>90 pt. Category</u> - Tentatively meets (until subsequent confirmation upon referral) the basic qualification requirements identified in the vacancy announcement and has experience in the same or similar job that has demonstrated superior proficiency in the primary requirements of the position.

<u>80 pt. Category</u> - Tentatively meets (until subsequent confirmation upon referral) the basic qualification requirements identified in the vacancy announcement and demonstrates satisfactory proficiency in the primary requirements of the position.

<u>70 pt. Category</u> - Fails to meet criteria described in the 80 pt. category.
Additional application guidance is available in NASA's *Applicant Guide (https://resume.nasa.gov/applicant_guide.html)*.

<u>Information for Veterans</u>: The Category Rating Process protects the rights of veterans by placing them ahead of non-preference eligibles within each category. Preference eligibles who meet qualification requirements and have a compensable service-connected disability of at least 10 percent must be listed at the top of the highest quality category, except when the position being filled is scientific or professional at the GS-09 grade level or higher.

For the purpose of the Career Transition Assistance Program (CTAP) and the Interagency Career Transition Assistance Program (ICTAP), candidates rated in the top quality category are considered well-qualified.

## Benefits

NASA offers excellent benefit programs and competitive salaries. To learn more about pay and benefits at NASA, click *HERE (http://nasajobs.nasa.gov/benefits/benefits.htm target=_blank)*.

## Other Information

Any applicant tentatively selected for this position may be required to undergo a pre-employment background investigation.

Individuals who have special priority selection rights under the Agency Career Transition Assistance Program (CTAP) or the Interagency Career Transition Assistance Program (ICTAP) must be well qualified for the position to receive consideration for special priority selection. See 'How You Will Be Evaluated' for definition of well qualified.

Federal employees seeking CTAP/ICTAP consideration must indicate their eligibility when applying for a position. The USAJOBS resume asks you to identify your ICTAP eligibility; the NASA Supplemental Information asks you to identify your CTAP eligibility. If you are selected for the position, you must be prepared to submit proof that you meet the requirements for CTAP/ICTAP. This includes a copy of the agency notice, a copy of their most recent Performance Rating and a copy of their most recent SF-50 noting current position, grade level, and duty location.

As a condition of employment, male applicants born after December 31, 1959, must certify that they have registered with the Selective Service System, or are exempt from having to do so under the Selective Service Law.

In order to receive preference in hiring, you must clearly identify your claim for veterans preference on your resume.

U.S. citizenship is required. NASA's *Applicant Guide (https://resume.nasa.gov/applicant_guide.html target=_blank)* provides the information needed to assist you in determining whether or not you can claim 5 or 10 point veterans preference. You should not submit documents to prove your eligibility for veterans preference at this time. However, you must be prepared to submit proof of veterans preference (DD-214, and, if claiming 10-point preference, SF-15 plus proof required by that form) as requested by the Human Resources Office. Veterans preference will only be considered based on what is supported For instance, if you claim 10-point preference, but are only able to document 5-point preference, you will be considered accordingly. If you fail to provide the required documents within the stated time period, we may withdraw a job offer and/or remove you from further consideration.

Your USAJOBS account asks you to assign a name to each of your resumes. When you apply to a NASA position, we will show you the text of the resume you have submitted, but we do not maintain the name you have assigned to that resume. If you wish to keep track of that information, we recommend you make note of it at the time you apply.

## How to Apply

This vacancy is being filled through NASA STARS, an automated Staffing and Recruitment System. NASA partners with USAJOBS in providing a seamless application process. Before you begin the application process, please read the vacancy announcement carefully and have all required information available. You may begin the process of submitting your resume by clicking on the 'Apply Online' link.

In order to be considered, you must submit a resume completed on the USAJOBS site. When completing your USAJOBS resume, please remember that NASA limits resumes to the equivalent of approximately SIX typed pages, or approximately 22,000 characters including spaces. You will NOT be allowed to complete the application process if your resume is too long or if your resume was uploaded to USAJobs from a second source. Additionally, NASA does not accept documents attached through USAJobs' document attachment feature.

Once you submit your resume to NASA, you will be asked to complete a short series of additional questions. You must finish the entire process in order to have a complete application package and receive consideration. Your answers will not be saved unless you finish the entire application.

You may edit a previously-submitted application, if the announcement is still open. For more information, see the *Applicant Guide. (https://resume.nasa.gov/applicant_guide.html target=_blank)*

If you are unable to apply electronically for this position, submit your resume and supplemental questions to: National Aeronautics and Space Administration (NASA), Resume Operations Center, Mailstop: HS50, Marshall Space Flight Center, AL 35812. DO NOT submit your resume directly to the Center advertising this vacancy. Mailed resumes must be received by the close of business on the closing date of the announcement. Hard copy resumes requirements are provided at: *Hard Copy Resume Requirements (http://nasajobs.nasa.gov/howtoapply/hardcopyresumes.htm target=_blank)*.

If you are a first time applicant, we recommend that you review NASA's *Applicant Guide (https://resume.nasa.gov/applicant_guide.html target=_blank)* to ensure that you are providing a complete resume. Failure to submit the supplemental data and a resume that contains all of the required information may result in loss of consideration for positions in which you are interested.

All applications must be received no later than midnight Eastern Time on the closing date of the announcement.

## Required Documents

NASA's application process has been specifically developed to ensure that we only ask you for the information we absolutely need to evaluate your qualifications and eligibility. In order to apply for this position, you only need to submit your resume and answer the screening questions and supplemental information. No additional documentation is accepted at the time of application. (For example you need not submit narrative 'KSA' statements; they are not required and will not be evaluated.) In this way we allow you to focus on preparing a resume that best describes your background and abilities. For assistance in preparing your resume, consult the *Applicant Guide (https://resume.nasa.gov/applicant_guide.html target=_blank)*.

Nothing further is required until requested by the Human Resources Office. At that point, we may ask you to submit documentation to support statements made in your resume. For example, we may ask you to provide academic transcripts or proof of Federal employment status. If you are claiming veterans' preference, we may ask you to submit proof of veterans preference (DD-214, and, if claiming 10-point preference, SF-15 plus proof required by that form). If you fail to provide the required documents within the stated time period, we may withdraw a job offer and/or remove you from further consideration.

## Contact

B. Ketcham / 757-864-2558 / LaRC-DL-LaRC-Jobs@mail.nasa.gov

## What to Expect Next

Candidates for NASA positions are evaluated using our automated staffing and recruitment system, NASA STARS, which compares your skills and experience as described in your resume with the requirements of the position. If you are found to be a highly qualified candidate, you will be referred to the selecting official for further consideration. (In some cases, individuals with priority for special consideration must be considered and selected before other candidates.) Whether or not you are contacted for an interview depends upon the location of the position and the judgment of the selecting official.

At NASA, we pride ourselves on efficient and timely recruitment actions, and you can normally expect to learn the outcome of the selection process in a fairly short period of time. In addition, to ensure that you can measure progress for yourself, NASA provides you with regularly updated information on the status of the vacancy announcement.